

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 75

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Ex parte RICHARD R. HERTZOG,  
STYLIANOS SIFNIADES and WILLIAM B. FISHER  
(hereafter Hertzog)

Appeal No. 2001-0509  
Application No. 08/601,879<sup>1</sup>

ON BRIEF

MAILED

MAR 29 2005

U.S. PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES

Before GRON, SPIEGEL and TIERNEY, Administrative Patent Judges.

GRON, Administrative Patent Judge.

DECISION ON APPEAL UNDER 35 U.S.C. § 134

Introduction

This is an appeal under 35 U.S.C. § 134 of an examiner's final rejection of claims pending in Application 08/601,879. Appellants'

<sup>1</sup> Application for patent filed February 15, 1996. Appellants claim benefit under 35 U.S.C. § 120 of the November 3, 1994, filing date of Application 08/333,929, now abandoned; the February 28, 1994, filing date of Application 08/203,845, now abandoned; the July 24, 1992, filing date of Application 07/920,811, now abandoned; and the January 17, 1989, filing date of Application 07/297,333, now abandoned.

Appeal No. 2001-0509  
Application No. 08/601,879

Claims 9-14, 16-18 and 20, all claims pending in the application, stand twice rejected under 35 U.S.C. § 103 in view of the combined prior art teachings of Sifniades et al. (hereafter Sifniades), U.S. Patent 4,358,618, patented November 9, 1982; Anderson et al. (hereafter Anderson), U.S. Patent 4,207,264, patented June 10, 1980; and United Kingdom Patent Specification 1,202,687 (hereafter Barilli), published August 19, 1970. We affirm the examiner's rejection.

Discussion

On March 18, 1992, the Board of Patent Appeals and Interferences (hereafter Board) affirmed an examiner's final rejection of Claims 1-8 of Herzog's Application 07/297,333, filed January 17, 1989, under 35 U.S.C. § 103 as unpatentable in view of the combined teachings of the same three references presently before us (Decision of the Board in Appeal No. 91-0763 (Paper No. 16)). The Board reaffirmed its decision On Request For Reconsideration (Paper No. 18). While the Board then considered an appeal of an examiner's final rejection of all Herzog's pending claims over the combined teachings of Sifniades, Anderson and Barilli, its decision in Appeal No. 91-0763 only discussed the combined teachings of Sifniades and Barilli. Claims 1-8 of Appeal

No. 91-0763 (Paper Nos. 16 and 18) read (Paper No. 16, Appendix; underlining added):

1. A process for decomposing a cumene oxidation product mixture containing cumene hydroperoxide (CHP) and dimethylphenyl carbinol (DMPC) to produce phenol, acetone and alpha-methyl styrene (AMS) with enhanced safety of operation and reduced by-product formation which comprises the steps:

(a) mixing the cumene oxidation product in a stirred or back-mixed reactor with an acid catalyst, with 10 to 100 percent acetone relative to the amount of acetone produced during the decomposition reaction, and with up to 4 weight percent additional amounts of water relative to the reaction mixture, at an average temperature between about 50°C and about 90°C for a time sufficient to lower the average CHP concentration of the reactor to between about 0.2 and about 3.0 weight percent, and wherein a portion of DMPC is converted to dicumyl peroxide (DCP); then

(b) reacting the reaction mixture from step (a) at a temperature between about 120°C and 150°C under plug-flow conditions for a time sufficient to decompose substantially all residual CHP and at least 90 percent of the DCP formed in step (a).

2. The process of claim 1 wherein step (a) additionally comprises reacting the reaction mixture having an average CHP concentration of between about 0.2 and about 3.0 weight percent at between 50°C and about 90°C under plug-flow conditions for a time sufficient to produce a reaction mixture having a CHP concentration no greater than about 0.4 weight percent.

3. The process of claim 2 further comprising the step:

(c) submitting the reaction product from step (b) to adiabatic flash evaporation to recover an acetone-rich distillate and recycling said distillate to step (a) to provide said acetone.

4. The process of claim 3 wherein the CHP concentration is monitored by on-line analysis.

5. The process of claim 1 further comprising the step:

(c) submitting the reaction product from step (b) to adiabatic flash evaporation to recover an acetone-rich distillate and recycling said distillate to step (a) to provide said acetone.

6. The process of claim 5 wherein the CHP concentration is monitored by on-line analysis.

7. The process of claim 1 wherein the CHP concentration is monitored by on-line analysis.

8. The process of claim 2 wherein the CHP concentration is monitored by on-line analysis.

We have underlined portions of Claim 1 of prior Appeal No. 91-0763, reproduced above, because we conclude that those underlined portions describe the subject matter of Claims 9-14, 16-18 and 20 of this appeal. For convenience, Claims 9, 10, 13, 14, 16-18 and 20 of this appeal are reproduced below (Paper No. 61, Appendix).

9. An improved method for the decomposition of cumene hydroperoxide by acidic catalyst to phenol and acetone wherein the improvement comprises decomposing cumene hydroperoxide in a non-isothermal manner in the presence of excess acetone in the amount of 10 to 100 percent acetone relative to the amount of acetone produced during the reaction.

10. The method in accordance with claim 9 wherein the cumene hydroperoxide is decomposed in a multiplicity of separate sequential reactors each with a controlled temperature range.

13. The method in accordance with claim 9 wherein the temperature of the cumene hydroperoxide decomposition is about 50°C and 90°C.

14. The method in accordance with claim 9 wherein the quantity of cumene hydroperoxide remaining after decomposition is from about 0.2 to 3.0 wt% of the total weight of the decomposition products.

16. An improved method for enhancing the decomposition of cumene hydroperoxide and producing cumene hydroperoxide decomposition products therefrom wherein the improvement comprises recycling the cumene hydroperoxide decomposition products in a cumene hydroperoxide back-mixed decomposition reactor in sufficient quantity whereby selectivity is higher and safety of the process is improved.

17. The method in accordance with claim 16 wherein additional acetone is added to the cumene hydroperoxide decomposition products in an amount of from about 10 to about 100 percent of the amount of acetone produced during cumene hydroperoxide decomposition reaction.

18. The method in accordance with claim 17 wherein additional water is added to the cumene hydroperoxide decomposition products to a level not greater than 4 wt.% in the cumene hydroperoxide decomposition mass.

20. A cumene hydroperoxide decomposition mass produced from the reaction of cumene hydroperoxide with an acid catalyst in a non-isothermal manner having acetone present in excess by an amount of 10 to 100 percent acetone relative to the amount of acetone produced during the reaction.

Because the Board concluded in Appeal No. 91-0763 that process Claims 1-8 of Hertzog's Application 07/297,333, filed January 17, 1989, now abandoned, were unpatentable under 35 U.S.C. § 103 in view of the combined prior art teachings of Sifniades, Anderson and

Barilli (Paper No. 16), and it maintained that decision On Request For Reconsideration (Paper No. 18), we carefully compared the subject matter defined by the claims here on appeal to the subject matter defined by Claims 1-8 of Appeal No. 91-0763. We conclude that the general processes defined by Claims 9-14 and 16-18 here on appeal encompass the more specific processes defined by Claims 1-8 of Appeal No. 91-0763. We also conclude that cumene hydroperoxide decomposition masses of Claim 20 presently before us encompass all the products made by the comparatively narrow processes of Claims 1-8 of Appeal No. 91-0763. While the Board did not previously consider the patentability of any products made by the rejected processes of Appeal No. 91-0763, Hertzog here does not argue that rejected product-by-process Claim 20 is separately patentable from process Claims 9-14 and 16-18 over the same prior art.<sup>2</sup> Accordingly, absent considerations of the old subject matter in light of new evidence or new subject matter in light of evidence previously before the Board, we must conclude that the previously considered subject matter of Claims 1-8 of Hertzog's Application 07/297,333, which was determined to be unpatentable under 35 U.S.C.

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<sup>2</sup> While Hertzog states that "[C]laims 9-14, 16-18 and 20 should each be considered individually" (Appellants' Appeal Brief, p. 4 (AB4)), we find no argument directed to the separate patentability of any one of Claims 9-14, 16-18 and 20.

§ 103 in view of the combined prior art teachings of Sifniades, Anderson and Barilli, still is unpatentable in view of the combined teachings of the same prior art even though subsumed by generic Claims 9-14, 16-18 and 20 of this appeal which encompass it.

We concede that "the claims presently on appeal define different subject matter than the claims involved in Appeal No. 91-0763" (AB1, last sentence). However, the claims presently on appeal also encompass the subject matter defined by Claims 1-8 of Appeal No. 91-0763 and thus are directed to the same invention.

Hertzog appeals the patentability of all subject matter defined and encompassed by Claims 9-14, 16-18 and 20 of its Application 08/601,879 in view of the combined teachings of the same prior art used to finally reject the patentability of Claims 1-8 of Appeal No. 91-0763 under 35 U.S.C. § 103. However, Hertzog does not deny any specific findings of fact or conclusions of law regarding the merits of the examiner's final rejection under 35 U.S.C. § 103 which cites and follows the Board's prior decision in Appeal No. 91-0763. Rather, Hertzog urges that (1) Claims 9-14, 16-18 and 20 of this appeal are directed to the same patentable invention as Claims 1, 4, 7-10, 32-34 and 38 of Zakoshansky's U.S. 5,254,751, issued October 19, 1993; (2) an examiner allowed Zakoshansky's patent with Claims 1, 4, 7-10, 32-34

and 38 over the teachings of Sifniades and Barilli (see the References Cited on the face of Zakoshansky's patent); and (3) an examiner finally rejected Claims 1-8 of Appeal No. 91-0763 and Claims 9-14, 16-18 and 20 of this appeal under 35 U.S.C. § 103 in view of the combined teaching of Sifniades, Anderson and Barilli and the Board affirmed the rejection without relying on Anderson for any specific teaching.

The examiner answered (Examiner's Answer, p. 4 (EA4)):

The allowance of the same claims in another patent does not render the instant claims patentable as well since the claims are read in light of the disclosures of the respective applications. The instant claims are not seen to overlap the claims of the Zakoshansky patent since the disclosures of each application is different.

"During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow." In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). Accordingly, even if the language of Claims 9-14, 16-18 and 20 of Herzog's Application 08/601,879 and Claims 1, 4, 7-10, 32-34 and 38 of Zakoshansky's U.S. 5,254,751, issued October 19, 1993, is identical, during patent examination the scope and content of the claims would likely differ depending on the disclosures of their respective supporting specifications. Herzog has not attempted to compare the scope and content of its claims to Zakoshansky's claims in light of the respective supporting specifications. Moreover,

the corresponding claims prima facie are not identical in scope.

For example, Claim 1 of Zakoshansky's patent reads (emphasis added) :

1. An improved method for the decomposition of cumene hydroperoxide by acidic catalyst to phenol and acetone wherein the improvement comprises decomposing cumene hydroperoxide in a non-isothermal manner in the presence of excess acetone whereby the molar ratio of acetone to phenol in a decomposition reactor is from about 1.1:1 to 1.5:1 whereby the rate of decomposition of cumene hydroperoxide is reduced and the reaction is more controllable and more selective.

Hertzog's Claim 9 presently on appeal reads (emphasis added) :

9. An improved method for the decomposition of cumene hydroperoxide by acidic catalyst to phenol and acetone wherein the improvement comprises decomposing cumene hydroperoxide in a non-isothermal manner in the presence of excess acetone in the amount of 10 to 100 percent acetone relative to the amount of acetone produced during the reaction.

The corresponding claims differ in their underlined portions. More specifically, Zakoshansky's claim specifies the amounts of excess acetone in the reactor in terms of the molar ratio of acetone to phenol in a decomposition reactor. Hertzog's claim specifies the amounts of excess acetone in the reactor in terms of the percentage of excess acetone relative to the amounts of acetone produced during the decomposition reaction. The ranges of amounts of acetone in the decomposition reactors may or may not overlap depending on the amounts of phenol produced during the

decomposition reactions. The amounts of phenol produced during decomposition reactions depends upon the types of reactors, the number of reaction stages, the temperatures of the reactors, the kinds and amounts of starting products and their purity, the kind and amounts of acid catalyst utilized in the reactors, etc.. Not only has Herzog not compared the scope and content of the subject matter claimed in its present application to the scope and content of the subject matter claimed in Zakoshansky patent, it has not explained how the subject matter claimed in its present application compares to subject matter taught by the applied prior art references.

The PTO does not have the burden or the ability to make Herzog's case for it. See In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977) (footnote omitted):

Where, as here, the claimed and prior art [inventions] . . . are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art [inventions] . . . do not necessarily or inherently possess the characteristics of his claimed [invention] . . . . Whether the rejection is based on "inherency" under 35 USC 102, on "prima facie obviousness" under 35 USC 103, jointly or alternatively, the burden of proof is the same, and its fairness is evidenced by the PTO's inability to manufacture products or to obtain and compare prior art products. See In re Brown, 59 CCPA 1036, 459 F.2d 531, 173 USPO 685 (1972).

In effect, Hertzog asks us to reconsider in this appeal a prior decision by the Board that the same subject matter, now encompassed by the generic claims of this appeal, is unpatentable under 35 U.S.C. § 103 in view of Sifniades, Anderson and Barilli (Paper No. 16). The primary basis for Hertzog's appeal is the fact that the PTO allowed Zakoshansky overlapping claims of different scope, allowed those overlapping claims in light of a different specification and examination record, and issued Zakoshansky's patent containing those claims, but denied the patentability of the subject matter of Hertzog's overlapping claims. Hertzog did not appeal the prior decision of the Board in Appeal No. 91-0763 under 35 U.S.C. § 141 or seek a remedy by civil action under 35 U.S.C. § 141. Instead, here again under 35 U.S.C. § 134, Hertzog argues that the PTO allowed claims drawn to an invention patentably indistinct from the invention of Hertzog's finally rejected claims to a different inventive entity. Even if we must concede that the claims here on appeal literally are different from those finally rejected in Appeal No. 91-0763 and overlapping subject matter was allowed to Zakoshansky over the same prior art, Hertzog has not met its burden to show or explain why a different result is here in order for claims which broadly encompass all the subject matter

Appeal No. 2001-0509  
Application No. 08/601,879

previously held unpatentable under 35 U.S.C. § 103 in view of the same prior art teachings. Hertzog's appeal lacks merit.

Conclusion

For the reasons stated herein, the examiner's final rejection of Claims 9-14, 16-18 and 20 of Application 08/601,879 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

Affirmed



TEDDY S. GRON )  
Administrative Patent Judge )



CAROL A. SPIEGEL )  
Administrative Patent Judge )

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MICHAEL P. TIERNEY )  
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Appeal No. 2001-0509  
Application No. 08/601,879

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